

## APPENDIX A

### PERCOLATION TEST PROCEDURE 1

Properly conducted percolation tests are needed to determine absorption system site suitability and to size the absorption system. Percolation tests must be conducted within the boundary of the proposed absorption system. The percolation test must be completed by an individual approved by the reviewing authority.

#### Test Hole preparation

1. Dig or bore holes 6 to 8 inches in diameter, with a maximum size of 10 inches, with vertical sides. The depth of the holes must be at the approximate depth of the proposed absorption trenches, typically 24 inches below ground. If hole is larger than 6 to 8 inches, place a piece of 4-inch diameter, perforated pipe inside the hole, and fill the space between the pipe and the walls of the hole with drain rock.
2. Roughen or scratch the bottoms and sides of the holes to provide natural unsmeared surfaces. Remove loose material. Place about 2 inches of ¾-inch washed gravel in the bottom of holes to prevent scouring during water addition.
3. Establish a reference point for measurements in or above each hole.

#### Soaking

1. Fill holes with clear water to a level at least 12 inches above the gravel.
2. If the first 12 inches of water seeps away in 60 minutes or less, add 12 inches of water a second time. If the second filling seeps away in 60 minutes or less, the percolation test should be run in accordance with the sandy soil test; proceed immediately with that test. As an alternative to proceeding with the test, if these conditions are met and documented, the percolation rate may be considered to be faster than 3 minutes per inch, and the test may be stopped.
3. If either the first 12 inches or the second 12 inches does not seep away in 60 minutes, the percolation test must be run in accordance with the test for other soils. In these other soils, maintain at least 12 inches of water in the hole for at least 4 hours to presoak the hole.

#### Test

1. Sandy soils (percolation rate of 10 minutes per inch or faster).  
Add water to provide a depth of 6 inches above gravel. Measure water level drop at least four times, in equally spaced intervals, in a 1 hour time period. Measure to nearest ¼-inch. Refill to 6-inch depth after each measurement. Do not exceed 6-inch depth of water. Use final water-level drop to calculate rate.
2. Other soils (percolation rate slower than 10 minutes per inch).  
Remove loose material on top of gravel. Add water to provide a depth of 6 inches above gravel. Measure water levels for a minimum of 1 hour. A minimum of four measurements must be taken. The test must continue until two successive readings yield percolation rates that do not vary by more than 15 percent, or until measurements have been taken for four hours. Do not exceed 6-inch depth of water. Use final water-level drop to calculate rate.

#### Records

Record the following information on the attached form, and include as part of the application:

- Date(s) of test(s),
- Location, diameter, and depth of each test hole,
- Time of day that each soak period began and ended,
- Time of day for beginning and end of each water-level drop interval,
- Each water-level drop measurement,
- Calculated percolation rate,
- Name and signature of person performing test,
- Name of owner or project name.

#### Rate Calculation

Percolation Rate = Time interval in minutes/Water-level drop in inches